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Autore	Altenbach Holm
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Descrizione fisica	1 online resource (XVI, 503 p. 121 illus.)
Disciplina	620.11892
Soggetti	Ceramics
	Glass
	Composites (Materials)
	Composite materials
	Continuum physics
	Mechanics
	Mechanics, Applied
	Ceramics, Glass, Composites, Natural Materials
	Classical and Continuum Physics
	I heoretical and Applied Mechanics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	 Classification of Composite Materials 2. Linear Anisotropic Materials 3. Effective Material Moduli for Composites 4. Elastic Behavior of Laminate and Sandwich Composites 5. Classical and Improved Theories 6. Failure Mechanisms and Criteria 7. Modelling and Analysis of Beams 8. Modelling and Analysis of Plates 9. Modelling and Analysis of Circular Cylindrical Shells 10. Modelling and Analysis of Thin-walled Folded Structures 11. Finite Element Analysis.
Sommario/riassunto	This textbook is written for use not only in engineering curricula of aerospace, civil and mechanical engineering, but also for materials science and applied mechanics. Furthermore, it addresses practicing engineers and researchers. No prior knowledge of composite materials

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and structures is required for the understanding of its content. The structure and the level of presentation is close to classical courses of "Strength of Materials" or "Theory of Beams, Plates and Shells". Yet two extensions have been included: the linear elastic material behavior of isotropic and non-isotropic structural elements, and inhomogeneous material properties in the thickness direction. The Finite Element Analysis of laminate and sandwich structures is briefly presented. Many solved examples illustrate the application of the techniques learned.